SOUTHEAST MANAGEMENT SERVICES
2470 Engineers Cutoff
Juneau, Alaska 99801
(907) 789-0637 Fax (907) 789-9487

March 12, 1994

Ed Emswiler
Solid Waste Coordinator
Southeast Alaska Regional Office
Alaska Department of
Environmental Conservation
410 Willoughby, Suite 105
Juneau, Alaska 99801-1795

Dear Mr. Emswiler:

Attached are the results of the test wells placed in the Zimovia Strait 52 fill, to determine whether saltwater infiltration was occurring through its dike and peripheral clay/rock seal.

Despite locating the well casing at two places and penetrating to about El. +0' (see attached photos), no water was found at any time. The well casing consisted of a 20'-long 3"-diameter pipe, drilled with four 5/8"-dia. holes about every 6" along the last 5' of the pipe end. A 16" driving tip with no holes was welded onto the drilled end of the casing, and a 16" driving head was welded onto the casing's top.

The casing first was driven to about El. +5' into the fill and the underlying mud, about 200' behind the shotrock dike. As shown on the attached recordings, no water was encountered during 8 days at a variety to tidal conditions. The well casing then was relocated to within 100' of the outside edge of the shotrock dike, about as close as it could be placed without risking damage to the clay sealant along the dike's inner side. The first several feet of shotrock surface were excavated to drive the casing as deep as possible. In spite of reaching a depth of about El. +0' in the fill, no water was encountered throughout the 9 days of recordings.

The obvious conclusion is that the Zimovia Strait 52's wood fill is not being affected by saltwater and furthermore, that the fill's design and construction is effective in preventing adverse water quality effects from the enclosed wood material. By all means call if you need any further information, or wish to discuss any details of the Zimovia Strait 52 project.

Sincerely yours,

Thomas R. Hanna

Attachment

cc: Carl Alsup, APC-Wrangell
Susan Cantor, EPA-Anchorage
Houston Hannafious, Corps of Army Engineers
Barry Hogarty, ADEC-Ketchikan

PHONE (907) 874-3371
FAX (907) 874-3654

ALASKA PULP CORPORATION
LUMBER DIVISION
6.5 MILE ZIMOVIA HIGHWAY
P.O. BOX 591
WRANGELL, ALASKA 99929

To: Tom Hanna

From: Chuck Oliver

Date: 2/16/94

Subject: Test Well #1 Zimovia 52

On February 2, 1994 a 3" diameter pipe with 5/8" drilled holes extending 5' up the pipe was driven 19' into the fill at a point 100' N.W. of the existing ash pit building, the pipe extending down to the old mud bottom. Testing began on 2/03/94 at 7:30 A.M. There had been a high tide of 14.2 at 5:55 A.M. We had one inch of mud but no water at that time. The rest of the testing showed this mud only at the bottom. Following are the dates, times and tides as soundings in the pipe were taken.

ALASKA PULP CORP. - WELL TEST FOR ASH PIT
TEST WELL #1

							HIGH TIDE				LOW TIDE			
							A.M.		P.M.		A.M.		P.M.	
DATE	TIME	CONTENTS	TIME	CONTENTS	TIME	CONTENTS	TIME	FT.	TIME	FT.	TIME	FT.	TIME	FT.
20394	7:30AM	1"MUD	11:20AM	1"MUD	2:30PM	1"MUD	5:55	14.2	6:56	10.2			12:41	1.8
20494					2:30PM	1"MUD	7:02	13.5	8:28	9.9	0:39	4.2	2:03	1.8
20594	7:15AM	1"MUD			2:30PM	1"MUD	8:18	13.4	9:52	10.4	2:00	5.0	3:23	1.2
20794	7:00AM	1"MUD	11:15AM	1"MUD	2:45PM	1"MUD	10:36	14.3	11:46	12.6	4:31	4.2	3:23	-0.6
20994	7:15AM	1"MUD			2:50PM	1"MUD	0:27	13.6	12:14	15.4	6:13	2.4	6:45	-1.6
21094	7:30AM	1"MUD	12:15PM	1"MUD	3:10PM	1"MUD	1:04	14.3	12:55	15.5	6:54	1.6	7:20	-1.6
21194	8:00AM	1"MUD	11:00AM	1"MUD	2:30PM	1"MUD	1:38	14.7	1:32	15.4	7:32	1.2	7:52	-1.3
21294	7:15AM	1"MUD	11:45AM	1"MUD	3:00PM	1"MUD	2:10	14.8	2:08	14.9	8:08	0.9	8:23	-0.7

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6.5 MILE ZIMOVIA HIGHWAY
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To: Tom Hanna

From: Chuck Oliver

Date: 3/3/94

Subject: Test Well #2 Zimovia 52

On February 14, 1994 the 3" diameter test well pipe was moved 100 feet closer to the dike face from the first test site. This pipe is the well pipe used in the first well with the 5/8" drilled holes in it extending up the pipe approximatly 5' from the bottom. No water was measurable at any tide in the bottom of the pipe. A surface hole in the fillcap was dug and the pipe pushed below ground level, our estimate of a 0' or +1' tide level. Following are the dates, time and tides as soundings in the pipe were taken.

ALASKA PULP CORP. - WELL TEST FOR ASH PIT
TEST WELL #2

							HIGH TIDE				LOW TIDE			
							A.M.		P.M.		A.M.		P.M.	
DATE	TIME	CONTENTS	TIME	CONTENTS	TIME	CONTENTS	TIME	FT.	TIME	FT.	TIME	FT.	TIME	FT.
21594	10:30AM	0"WATER			2:45PM	0"WATER	3:41	13.8	3:54	12.0	9:56	1.8	9:54	2.3
21694	7:45AM	0"WATER					4:13	13.1	4:35	10.7	10:3	2.4	10:28	3.5
21794	7:20AM	0"WATER			1:22PM	0"WATER	4:49	12.4	5:25	9.5	11:26	3.1	11:08	4.7
21894	7:22AM	0"WATER			2:40PM	0"WATER	5:34	11.7	6:33	8.6			12:28	3.6
22194	7:20AM	0"WATER			2:45PM	0"WATER	9:10	11.7	10:31	10.2	2:55	6.2	4:05	1.8
22294	7:15AM	0"WATER					10:12	12.7	11:15	11.6	4:04	5.2	4:54	0.5
22394	7:30AM	0"WATER					11:04	13.9	11:54	13.0	4:58	3.8	5:36	-0.8
22494	7:20AM	0"WATER					11:49	15.0			5:44	2.3	6:16	-1.7
22594	7:40AM	0"WATER					:30	14.4	12:33	15.9	6:27	0.8	6:54	-2.3

Aerial view of the Wrangell mill's log storage/sorting area, showing location of test well within the Zimovia 52 fill

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Looking west at the test well casing in its initial location, 2/7/94

Looking west at the test well in its relocated position near the outer dike on 3/10/94. Note that the casing is below the shotrock surface